

Individualizing the Orientation Process for Newly Hired CRNAs in a Large Academic Medical Center

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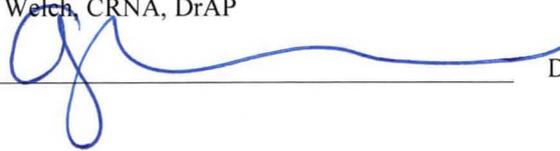
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Abstract

Purpose: The purpose of this scholarly project was to investigate whether an individualized clinical orientation would result in a shortened time to orient and integrate Certified Registered Nurse Anesthetists (CRNAs) into practice in a large academic medical center. By individualizing the orientation process, this project seeks to determine if this process change will lead to increased job satisfaction.

Methods: A new orientation process was developed and tailored to the needs of each newly hired CRNA. The new process provided tools to be used by new CRNAs and their supervisors throughout the initial clinical orientation period. New CRNAs hired to Mayo Clinic from September 2016 to February 2017 were oriented using the new process and tools. A survey was utilized to compare the satisfaction of the post-intervention group with a pre-intervention group of CRNAs hired from October 2011 to June 2016. The length of orientation for the pre- and post-intervention groups was also compared.

Results: Orientation time was decreased from 12 months in the pre-intervention group to an average of 5.25 months in the post-intervention group. This reduction included a decrease in the number of days spent in 1:1 orientation with a CRNA; from an average of 65 days in the pre-intervention group to an average of 32 days in the post-intervention group. The percentage of CRNAs who reported increased satisfaction or highly increased satisfaction with the orientation process was increased from 69% of the pre-intervention CRNAs to 78% for the post-intervention CRNAs.

Conclusion: This scholarly project showed an increase in satisfaction with the orientation process for CRNAs who received a tailored orientation versus a generic orientation, but was limited by a small sample size. The reduction in orientation time of over six months using the new process was clinically significant to the conducting institution. It allowed new CRNAs to be fully integrated into practice much sooner, resulting in a significant reduction in orientation costs.

Data Sources: Medscape, PubMed, Cochrane Library, CINAHL, Google Scholar, Ovid, Embase

Keywords: Certified Registered Nurse Anesthetist, clinical orientation, retention, job satisfaction.

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Introduction

There is evidence in the literature that an individualized orientation program will lead to greater success of new employees within an organization.¹ This benefits the employer and the employee and could result in increased retention as well as improved job satisfaction of the employee.¹ A poor orientation can lead to an employee exiting a first job within 12 months, or leaving the profession completely.¹ There is no consensus in the literature that any one intervention is better than another when it comes to orientation strategies.¹ Most interventions studied led to positive outcomes, which could indicate that it is not the specific intervention that matters; the key to successful orientation may be the fact that the employer values the new employee and has interventions in place to help the employee assimilate.¹

The majority of existing literature focuses on new Registered Nurse (RN) or Advanced Practice Registered Nurse (APRN) graduate orientation and assimilation into new jobs.¹⁻⁶ Evidence shows that new graduate advanced practice nurses who were experts in their previous nursing jobs needed orientation in order to move from an experienced to a novice role as they start a new job.^{7,8} New graduate advanced practice nurses require an orientation with a different focus than those with past experience as an APRN. There may be improved retention and decreased orientation costs by investing in a process that tailors more specifically to both experienced and novice nurses' needs as they transition to a new role.⁸

There is little information about Certified Registered Nurse Anesthetists (CRNAs) and their orientation needs when starting a new job. The purpose of this scholarly project was to determine whether taking past experience into account and designing an individualized orientation would result in decreased orientation time and increased satisfaction with the orientation process among newly hired CRNAs. The aim was to improve the orientation process

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for experienced and new graduate CRNAs hired to a large academic medical center, decrease the amount of time required to orient and integrate them into the practice, and increase job satisfaction. This was accomplished by designing an individualized clinical orientation for each new CRNA, along with the development of a website with resources for new CRNAs and their supervisors to guide them through the orientation process to the institution. It was hypothesized the new, individualized orientation process would decrease the amount of time required to orient and integrate CRNAs into practice, while increasing satisfaction with the process, when compared to non-individualized clinical orientation.

Research questions:

Primary research question: Does individualizing the orientation process for newly hired CRNAs shorten the time required to orient and integrate them into practice at a large medical teaching institution increase satisfaction with the orientation process compared to a generic orientation?

Secondary research question: Does an individualized orientation for newly hired CRNAs to a large medical teaching institution increase satisfaction with the orientation process compared to a generic orientation?

Review of Literature

Introduction

It has been shown that a strong orientation program will lead to success of new employees within an organization.⁹ New employees do not always receive an orientation that meets their specific needs.⁹ It is in the best interest of employers to ensure they are making the most of this time and monetary investment, along with preparing employees to be successful at their new job, by providing job specific training and teaching.¹⁰ There is evidence in the

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literature to show that a good orientation program will lead to greater success of new employees within an organization.¹¹

A good orientation program can also lead to a decrease in turnover; it has been demonstrated that one of the reasons for high turnover in an organization is a lack of good orientation and training. If a new employee can be well oriented and shown the value of fostering teamwork and productivity, it can lead to a lower turnover rate.¹² Decreased turnover causes a decrease in costs for an organization, as recruitment and orientation of new employees takes time, money, and manpower of existing employees to accomplish.^{3-5,13} Supporting new employees with a quality orientation program will allow employees to succeed in their new job and the organization. This leads to job satisfaction, employee commitment to the organization, and retention of employees within the organization.¹⁰

Timing and content of orientation

There are differing opinions regarding the timing of new employee orientation, the content of new employee orientation, and how the orientation process should be carried out.¹⁴ The groundwork for a good orientation can begin during the recruitment and interview process. Information can also be provided to the employee before they start employment, which could help relieve the anxiety on the first day of a new job.¹⁵ This can include information about the institution's values, mission, and vision, along with information about dress code, schedule information, contact information for their supervisor, and what to expect on the first day of employment.

Most of the information in the literature agrees that new employee orientation should begin on the first day or within the first week of employment at a new organization.¹⁶ While it is important to begin orientation in the first days of employment, it is also important to ensure that

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new employees are not overwhelmed with too much information during this time.¹⁶ New employees can have high levels of anxiety when beginning a new job. The new employee may benefit from having their first week of employment scheduled in detail, allowing them to begin to fit into the organization, while knowing the expectations and tasks to be achieved during that first week.¹⁷

Other information suggests that orientation is a process, and cannot be tied to a single first day or first week of employment, and that there is no universal length for orientation.¹⁵ Another theory of orientation states an employer should provide an adequate orientation up front, let the employee gain knowledge and grow in the job, and avoid abandoning the new employee or letting them flounder after the initial orientation has concluded. This can be accomplished by monitoring their progress regularly.¹⁵ It is also suggested that the orientation process not be too long, as the employee could become a perpetual “newbie,” and that job descriptions and policies of the company should be discussed soon after beginning employment to allow new employees to know what is expected of them.¹¹

There are varied views regarding what information should be included in a new employee’s orientation and how the information should be learned.¹⁸ Orientation and training of new employees are related to each other, but involve different strategies. Training focuses more on how a specific job or task needs to be performed, while orientation focuses more on why things are done in a certain way within an organization. Orientation concentrates more on an employee’s role within the organization and their attitudes about the work they will be doing.¹⁸

There are some essential tasks that must be completed at a point early in the orientation process.¹⁴ The organization’s policies and procedures should be reviewed. This may include tasks such as payroll forms, insurance and benefit information, sick leave, expectations of work

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hours and timekeeping, break policies, phone and internet use, dress code, confidentiality expectations, computer systems, and any unwritten rules that should be followed. The new employee should be given a tour of the work environment, rest rooms, parking, break areas, office equipment, and other areas pertinent to the job. Short- and long-term expectations should be discussed, as well as day to day tasks.¹⁵

Beyond these initial orientation tasks, there is myriad information in the literature about other tasks that should be completed during a new employee's orientation. One suggestion is to give the new employee an opportunity to help create the orientation plan.¹⁵ This would allow the manager and the employee to work together to determine the best timing and methods for gaining necessary information, and for completion of different aspects of the orientation.¹⁵

Another suggestion would allow all paperwork combined in one location for the employee to get all at once, rather than handing out multiple forms and documents at various times.¹⁷

To give the new employee more exposure to other people in the organization, it can be helpful to involve staff other than the direct supervisor in the orientation process. The supervisor should be involved in some aspects of the orientation, but they can share their workload and utilize the expertise of others to assist in the orientation process; this allows the new employee to get to know others in the organization.¹⁵ Pairing the new employee with a mentor or buddy can help with integration and socialization into the organization as well.¹⁵ A manager should use creativity when orienting new employees, keeping employees from becoming bored with the process and allowing the use of more unique methods of orientation.¹⁶

A lack of good orientation for APRNs was taken into consideration at Children's Hospital in Philadelphia, after many new APRNs reported they felt unprepared for their new roles.⁸ The educator at the hospital met with the new employees at the beginning of their

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orientation to perform a needs assessment and analyze their prior nursing and advanced practice nursing experience. The information gained through the needs assessment was used to develop an orientation for each new APRN that was individualized to their needs.⁸ Over half of the APRNs who took part in the individualized orientations felt their needs were met. The hospital did not calculate a return on investment for this program, but was motivated by recruitment, staff satisfaction, and retention.⁸

There is little information regarding which of the different methods of orientation are the most successful. Research has shown that an improvement in new employee orientation can improve retention rates within an organization.¹⁶ It is also suggested that employees have more satisfaction and employee retention is higher with successful orientation programs.¹⁹ However, there is little proven about which of the methods are most effective.¹⁹ It is also unclear why some orientation programs are successful, and others are not.¹⁹

Research on individualized orientation programs is also lacking, and whether they are more successful than generic orientations is uncertain. One article reviewed states that all employees are different and come with different needs, uncertainties, and anxieties requiring a flexible, individualized orientation format.¹⁸

Retention and turnover

Replacing an employee within an organization can cost anywhere from 20% of an employee's salary for lower skilled workers, to 250% of their salary for highly skilled and specialized workers in difficult to replace positions.²⁰ Turnover costs vary significantly depending on the organization and type of employee. Turnover is normal and an expected part of any company, but turnover of employees that is higher than expected can lead to large costs.²¹ Direct costs of turnover include recruitment, selection, hiring, orientation and training, lost

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productivity, hiring temporary workers, training of replacement workers, and paying overtime to remaining staff until a new person can be hired and trained.^{21,22} Indirect costs could include lost work hours, decreased productivity, operating capacity, and customers coupled with increased training time.²²

Turnover can be attributed to many factors, including dissatisfaction with management and supervisors, job content, salary, work life balance, and work conditions.^{21,23} Other factors leading to turnover can include the employee not being a good fit for the job; the job was not what the employee expected, the employee feeling a lack of decision making power, a lack of coaching or feedback from their manager, and a lack of opportunity for growth within the organization.^{21,23}

There is evidence that turnover could decrease the consistency and quality of customer service within an organization, which could cause decreased revenue and profitability. This is a result of new employees hired to replace employees that left, who are not at the same level of expertise and service as those employees who were there longer term and had mastered the tasks needed for the job.²¹

Formal nurse residency and internship programs can reduce turnover rates in the first year of employment of new nurses, resulting in decreased cost and increased retention, along with increased competency of the new nurse.²⁴ Focusing on increased job satisfaction early in an employee's career by the investment into new graduate orientation programs, could have a large impact on retention.⁴ Clinical coaching and internship or residency programs for new graduate nurses, along with feeling welcomed and supported by the organization, can contribute to job satisfaction during the transition to a new job.^{1,6}

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Orientation program interventions

There are many different interventions associated with new employee orientation programs.^{6,15} There is no consensus regarding the most effective intervention, nor is there a length of orientation shown to be the most effective.^{1,13,14} One study showed the orientation length should be based on the learning needs of each employee and their prior experience.¹³ There is also evidence that increased orientation time leads to increased job satisfaction.¹³

One of the most commonly cited interventions was the use of preceptors for employee orientation.^{5,6,13,25} Preceptors are role models and increase the satisfaction of new employees. Preceptors can assist with the new employee's assimilation and acceptance into the organization as well as increase the confidence of the new employee and provide social connections.^{13,25}

Other orientation interventions included checklists with core competencies, classroom training, discussions with peers, internships and residencies, hands-on practice training with preceptors, role playing, teaching clinical skills, written and oral exercises, and discussion groups.^{2,5,6,13} Some studies illustrate the importance of social activities and networking, along with emphasis on work life balance.^{5,8} One study suggests that a program that is structured around an employee's individual needs may lead to increased satisfaction.⁶

There have been positive results reported related to new employee orientation where there is a structured program in place. New employees have reported increased confidence, competence, an increased sense of belonging, role clarity and preparation, and a feeling of connection to peers.^{1,8} They also reported the ability to build critical thinking skills, expand their clinical knowledge, and build relationships and trust with their peers.²⁶ Interventions associated with orientation programs may cause increased job satisfaction and job retention,

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increased employee engagement, and better patient outcomes and safety resulting in a decreased cost to the health care system.^{2,3}

There is no evidence to show which types of orientation programs are most effective in terms of retention of staff, but some evidence to show that all strategies can be effective in the retention of new employees.¹ Multi-faceted and specialized orientation programs with several types of interventions may increase retention of new employees compared to programs with single interventions.^{6,19}

Gaps in the literature

Prior research has not used new employee perceptions and knowledge of what their orientation needs would be based on prior practice and experience. Previous studies have touched on the idea of having orientations that are tailored to each new employee, but no studies have actually done this. It has been shown that a successful orientation program will help a new employee to succeed in an organization in relation to required skills, socialization, and job satisfaction.^{1,6,10,15,19,26} While there are many methods that can be used to conduct a new employee orientation, it is not clear which of these methods work the best in terms of achieving these goals. There has not been previous research to show specifically that an individualized orientation will lead to increased satisfaction and shortened orientation time among newly hired CRNAs.

Background & Significance

Mayo Clinic is a large academic medical center located in Rochester, MN. This institution employs approximately 300 CRNAs in the Department of Anesthesia. The practice consists of two large hospitals and an outpatient procedure center. Within the two hospitals, there are 110 traditional operating room suites and seven offsite practices, which consist of

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procedural areas in various locations throughout the hospitals (remote from the operating room areas). There are 19 unique and separate anesthetizing locations within the practice. These locations are staffed by a mix of CRNAs, residents, and nurse anesthesia students. A CRNA in the Mayo practice may choose to have one or several home area(s) where they work the majority of the time, or they may choose to float to all areas of the practice. Each anesthetizing area is staffed by a combination of CRNAs that practice in that area and CRNAs that float to all areas.

Historically, the department has hired the majority of new CRNAs from the nurse anesthesia program associated with Mayo Clinic. The Student Registered Nurse Anesthetists (SRNAs) from the Mayo Anesthesia Program have spent 2 years doing clinical rotations in all areas of clinical anesthesia practice at Mayo Clinic. Once they have graduated and become CRNAs, orientation to the clinical practice consists of several days spent in the offsite areas they did not go to independently as students and learning those practices with an experienced CRNA. Orienting to the offsite practices allows them to become familiar with all areas of the hospital. Since the SRNAs have done clinical rotations at Mayo Clinic for 2 years, they are familiar with the operating room practices including staff, geography, electronic medical records, and other idiosyncrasies of the practice. No further orientation is needed for these new CRNAs.

In 2011, the need for CRNAs at Mayo Clinic exceeded the amount of students graduating from Mayo's program, requiring the department to hire CRNAs from outside the institution. Since this had not been done for many years, there was not a system in place to effectively orient CRNAs that came with different backgrounds. The new CRNA outside hires since 2011 have all been given the same 1-year long clinical orientation, not considering the type of practice they came from, experience level, personality, expectations, or ability to assimilate into a large teaching institution. Decreased retention of these outside CRNA hires led the researcher to

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hypothesize that lack of consideration of these differences was a potential problem with the current orientation format and that individualizing the process may decrease the length of orientation while increasing employee satisfaction.

The cost to recruit, interview, select, hire and orient a new CRNA is significant. It is estimated by the Human Resources Department at Mayo Clinic that it costs approximately one and a half times a CRNA's salary to recruit, interview, relocate, and orient them. This equals a cost of approximately \$281,000 for each new CRNA. The majority of this expense is attributed to paying the salary of the new CRNA as well as clinical preceptors and supervisors during the orientation process. Much of the orientation includes non-productive, non-billable hours for the new CRNA and/or one or more other CRNAs. Shortening the orientation process by making it more focused and specific to each new CRNA would decrease the amount of non-productive time for both the new CRNA and their preceptors and supervisors. This could result in significant savings to the institution.

Methodology

Permission for the study was gained from the Mayo Clinic-Rochester and University of Michigan-Flint Institutional Review Boards (*Appendix A*). Study participation was voluntary, and all participants were provided with a comprehensive informed consent letter prior to participation (*Appendix B*). Survey results were anonymous, collected using Qualtrics with the data stored on a secure, password protected database and drive. All other orientation material and surveys were retained and kept secure per Mayo Clinic-Rochester policies and procedures. Study participants who were previously oriented did not benefit directly from participation in the study. Potential benefits to employees using the new orientation process were measured by length of orientation and surveying satisfaction with the orientation process.

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Inclusion criteria included CRNAs currently employed at Mayo Clinic who were hired from outside Mayo Clinic from January 2011 to December 2015 and September 2016 to February 2017. CRNAs hired from outside Mayo Clinic who are no longer employed at Mayo Clinic were excluded from the study due to privacy concerns from the Human Resources Department. The exclusion of no longer employed CRNAs precluded data collection and analysis of the impact of the two orientation processes on retention.

The study participants consisted of two groups. Pre-intervention CRNAs that were hired from outside Mayo Clinic from January 2011 to December 2015, and post-intervention CRNAs hired after implementation of the new orientation process from September 2016 to February 2017. These CRNAs came to the institution with varied backgrounds and levels of experience, many different anesthesia practice models, and worked in organizations that ranged from very small to large practices. The CRNAs were selected to participate in the study because it was hypothesized that the current orientation process for outside CRNA hires had not been successful. The questionnaire attempted to capture the ideas and viewpoints of the CRNAs hired from outside the institution to determine their satisfaction with the orientation process.

The interventions in this study incorporated many of the strategies used in prior studies, such as using clinical preceptors, hands-on simulations, and blended learning between the new CRNA, preceptors, and supervisors. Unique to this study, newly hired CRNAs were given a clinical competency survey (*Appendix C*) during their first 2 weeks of clinical work to ascertain the CRNAs' own perception of their clinical orientation needs based on prior practice and experience. This guided the new CRNA and their supervisor in the development of a tailored clinical orientation schedule, which allowed the new CRNA to gain the knowledge and skills necessary to successfully practice in all areas of the anesthesia department at Mayo Clinic. The

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survey included experiences in specific surgical specialties where they would be practicing at Mayo Clinic and experience with specific aspects of the electronic medical record used at Mayo Clinic.

The first 3 months of orientation were redesigned and structured using the needs assessment. This allowed for a quality experience for the CRNA, assisting them to move more easily into previously unfamiliar areas of the practice after completing orientation. The new CRNA was assigned to a supervisor in a specialty area of their expertise to allow the CRNA to learn the policies, procedures, and tasks specific to Mayo Clinic while practicing in an area of anesthesia where they feel comfortable. Starting orientation in an area of comfort allowed new learning experiences to be added one at a time rather than giving the CRNA many new things to learn simultaneously. The tailored orientation schedule allowed for adjustments to be made throughout the orientation if more or less time is needed in a specific clinical area.

The new orientation process implemented for CRNA hires from outside of Mayo Clinic included tools developed for use by the new CRNA and their supervisor. It included a website with tools and other resources for use during orientation and beyond. The tools included a checklist of orientation tasks for the new CRNA (*Appendix D*), a list of Mayo terminology for the new CRNA to reference during their orientation and when rotating to new clinical areas (*Appendix E*), and a clinical competency survey to assess the prior experience level of the new CRNA as well as their perceived orientation needs (*Appendix C*). These tools were placed on a website where they could be accessed and printed by the supervisor (*Appendix F*). The orientation checklist on the website also included links to all pertinent websites within the Mayo Intranet for individual topics, providing a simple way for new CRNA hires to access the

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information in the future. Also included on the website was a list of mandatory training and competency modules for the new hires.

At the time of implementation, the new tools and website were presented to the Mayo Clinic CRNA leadership group. A demonstration of the website (including the links within the orientation checklist) was completed, along with a discussion of the use of the survey to assess prior experience and perceived orientation needs. This presentation was given to the CRNA leadership group on three subsequent occasions during the implementation phase as new supervisors were added to the leadership team. Individual meetings with supervisors were also held throughout the implementation process to guide them in using the tools and website for orientation of new CRNAs as they were hired.

New CRNAs met their supervisor on the first day of orientation and were given a packet containing resources including department phone numbers, an organizational chart of the Department of Anesthesia, CRNA supervisor and lead names, maps of the institution and parking and locker information. New CRNAs met often with their supervisor during the first 4 weeks of orientation to cover the items listed in the Orientation Checklist, and complete any necessary paperwork. The clinical competency survey was given to each new employee during the first 2 weeks of their orientation. After completion, the new CRNA met with their supervisor and the scheduling supervisor to discuss their clinical orientation. A timeline of clinical orientation was mapped out using the survey and discussion between the new CRNA and the scheduling supervisor. The timeline was used as a guide, with the ability to adjust the orientation time to be shorter or longer in any specific clinical area. The new CRNA and their supervisor met during the clinical orientation to assess how the orientation was progressing, and to determine whether any changes to the timeline were needed.

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During the implementation period, changes were made to the new orientation process based on feedback from the new CRNA and their supervisors. It was discovered that some required online learning modules were missing from the new employee lists; this deficiency was corrected. After the webpage was implemented, it was suggested by the CRNA leadership team and several new CRNA hires that a link be added for the Allied Health Staff Employee Policy Manual (*Appendix G*). This is a searchable website for commonly searched policies including funeral leave, FMLA, shift differential, short term disability, corrective action, emergency staffing plans, maternity/paternity leave, jury duty, paid time off, and timekeeping. Several items were also added to the new orientation checklist, including training in the use of the Zoll Defibrillator and setup of the auto login process for the Mayo Dock to automatically open certain applications when logging onto a Mayo computer.

Other changes to the orientation process were made during the implementation process based on open-ended comments obtained from the survey sent to the pre-implementation group of CRNAs. Some of these include starting the new CRNAs at the hospital where their supervisor is based in order to have increased contact, starting experienced CRNAs in areas where they can have more independence, and giving the new CRNAs an approximate outline and timeline of their clinical orientation.

Results

Length of orientation and satisfaction with the orientation process were measured. Length of orientation for the pre-intervention group was fixed at 1 year. The amount of time spent in each clinical rotation was fixed for each newly hired CRNA, not taking into account past experience. The amount of time spent in each rotation was pre-determined by CRNA leadership to be an adequate length to learn that area and become competent. Length of orientation for the

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post-intervention group was measured from start date to the point where the new CRNAs had completed all of their clinical orientations and were able to take call. Length of orientation for the post-intervention group ranged from 3.5 months to 7.5 months, with an average orientation time of 5.25 months (*Figure 1*). The reduction in length of orientation time included a decrease in the number of days spent in 1:1 orientation with a CRNA; from an average of 65 days in the pre-intervention group to an average of 32 days in the post-intervention group (*Figure 1*). The amount of time spent in each clinical area for the post-intervention group was determined between the new CRNA and their supervisor, taking into account past experience and the new CRNA's comfort level with each clinical rotation. There was the ability throughout the orientation process to make an orientation in a certain clinical rotation longer or shorter than originally planned if the new CRNA felt they needed more or less time in an area.

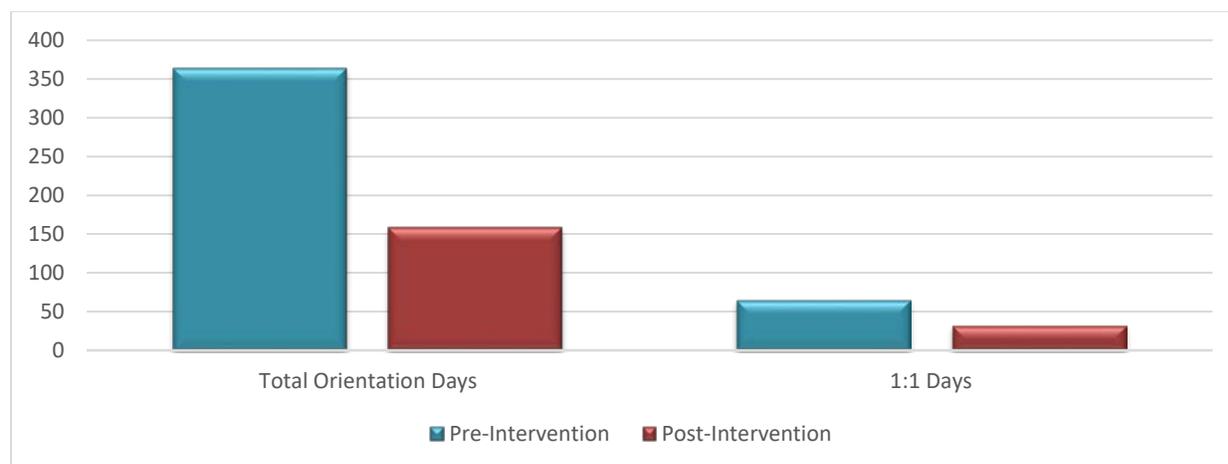


Figure 1: Comparison of total and 1:1 orientation time

Satisfaction with the orientation process was measured with an online Qualtrics survey (*Appendix H*). The survey was sent electronically to pre- and post-intervention CRNAs. Surveys were sent to 21 pre-intervention CRNAs with 13 surveys completed (62% completion), and 10 post-intervention CRNAs with 9 surveys completed (90% completion). Satisfaction with

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the orientation process, and an individual's input into the orientation process were examined. A combination of yes/no, Likert scale, and open-ended questions were utilized. Because this was a pilot study, the p value threshold was raised to 0.2. If the p value of a question was less than 0.2, it could be considered statistically significant enough to do further study with a larger sample size.

When asked whether they received an orientation specific to their orientation needs, 69% of the pre-intervention group answered yes, and 78% of the post-intervention group answered yes. The association between the variables was done via the Chi-square test. The p value for this question was 0.66 (*Figure 2*). While not statistically significant, there was an increase in the percentage of CRNAs who felt they received a specific orientation, which could be considered clinically significant for the purpose of this project. Likewise, when asked whether their orientation plan included adequate time in each rotation, 77% of the pre-intervention group answered yes, and 89% of the post intervention group answered yes. The p value for this question was 0.47 (*Figure 2*). Again, while not statistically significant, the increase in percentage of CRNAs who felt they had adequate time in each rotation could be clinically significant.

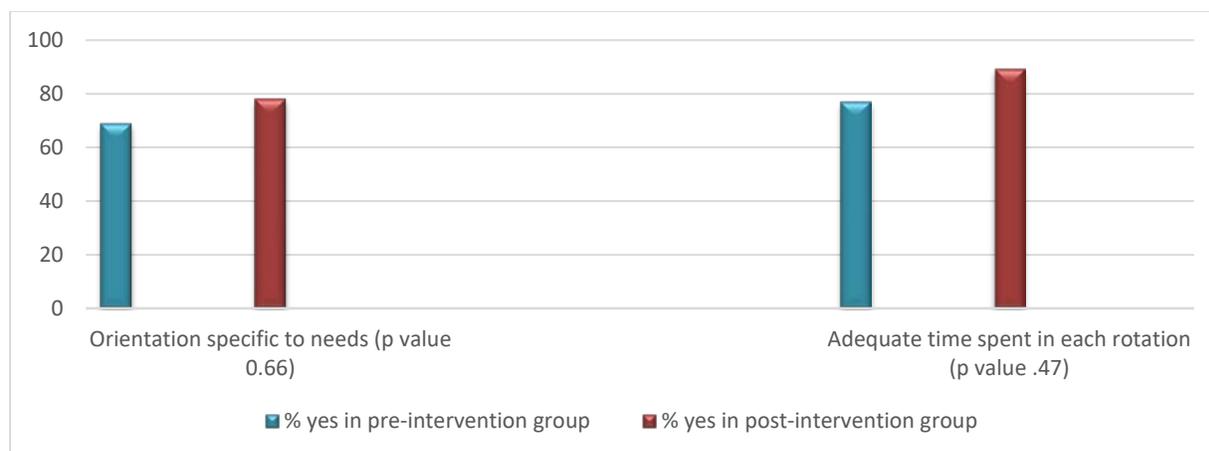


Figure 2. Perception of individualization of the orientation process

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The Likert scaled questions compared the continuous variables between the pre- and post-intervention groups using the 2-sample T-test or the non-parametric equivalent (Wilcoxon Rank-Sum test). There was no statistical significance in satisfaction of the overall orientation process between the pre- and post-intervention groups, nor was there significance in the satisfaction with preceptors between the pre- and post-intervention groups (*Figure 3*).

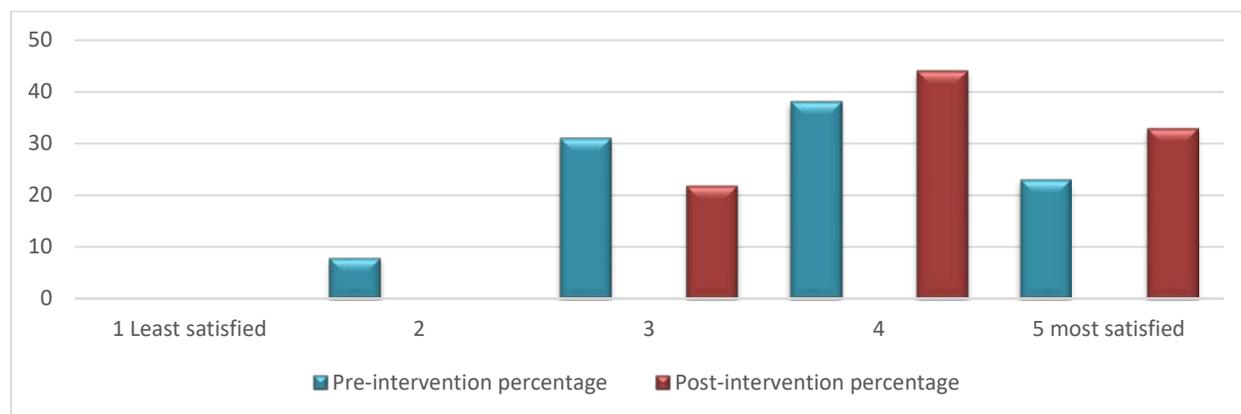


Figure 3. Satisfaction with orientation process

When asked if they felt they were able to be an active participant in the creation of their orientation schedule, there was a significant difference between the pre- and post-intervention groups, with a p value of 0.02 (*Figure 4*). There was also a significant increase in the post-intervention group of those who felt they had input and participation into the orientation process (p value 0.2), along with an increase in the number of CRNAs who felt their supervisor was supportive and helpful to them during their orientation (p value 0.7). While the data on supervisors was not statistically significant, it could signify that the new orientation process was beneficial to the supervisors as well as the new CRNAs, as there was no formal orientation process for supervisors to follow when orienting a new CRNA prior to this scholarly project.

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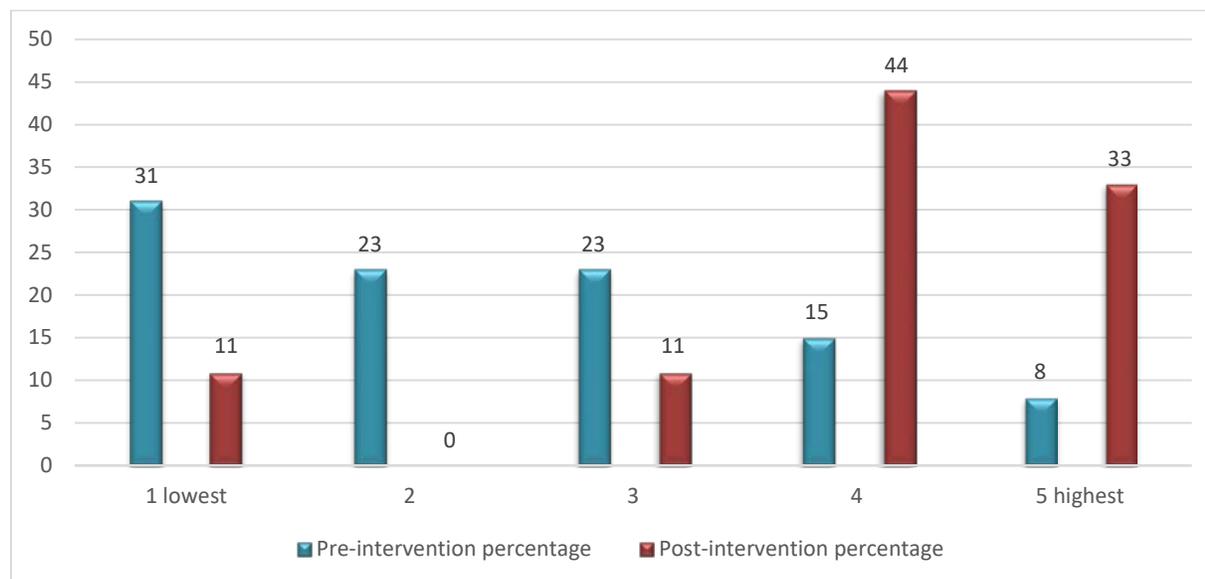


Figure 4. Perception of active participation in the orientation schedule creation

There was little difference between the pre- and post-intervention groups when asked whether they felt an orientation process individually tailored to each CRNA would be more effective than using the same orientation process for all CRNAs hired from outside Mayo Clinic. In the pre-intervention group, 92% agreed or strongly agreed, while in the post-intervention group, 100% agreed or strongly agreed that an individualized orientation would be more effective (*Figure 5*).

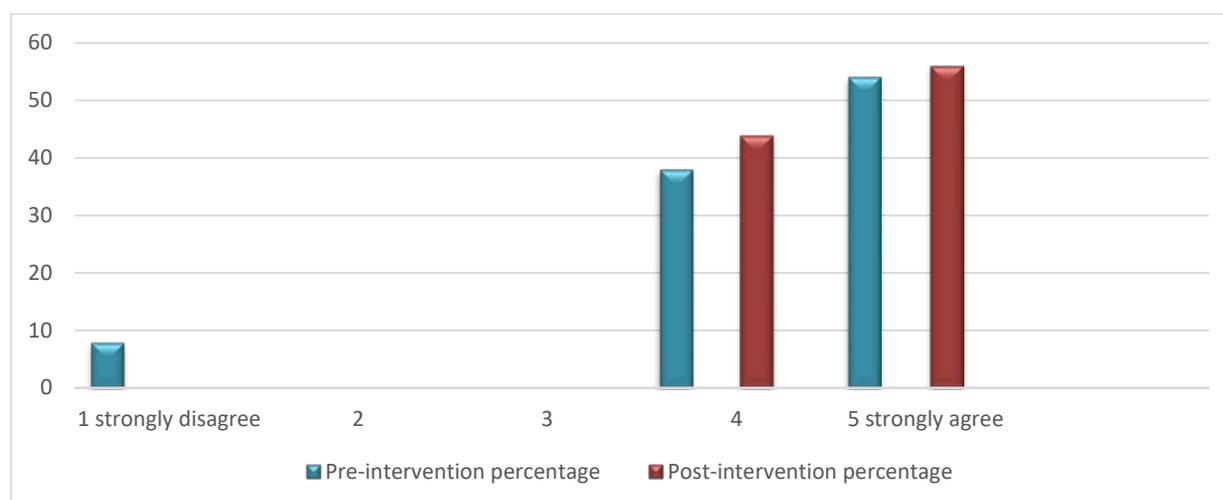


Figure 5. Perception of effectiveness of an individually tailored orientation process

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When asked about overall satisfaction related to an individualized orientation, there was no statistical significance between the pre- and post-intervention groups. However, there was a larger percentage of CRNAs in the post-intervention group who answered “increased job satisfaction” or “highly increased job satisfaction,” with 69% of pre-intervention CRNAs and 78% of post-intervention CRNAs.

The open ended questions allowed the CRNA leadership team to gain insight into the thoughts and feelings of new CRNAs regarding the orientation process through the anonymous survey. Areas for improvement were pointed out in the comments in the open ended questions, and comments by both groups that took the survey have been used to further improve the orientation process for both the new CRNAs and their supervisors during this pilot study. A recurrent theme in the open ended question was that CRNAs want to have more input and communication into their own orientation plan. Most feel this led/will lead to increased job satisfaction and a better overall orientation process.

When asked how CRNAs felt satisfaction would be increased or decreased had they received an individualized orientation, the pre- and post-intervention groups had similar comments. These included: making the first months easier by tailoring to more of what they needed refreshers of; a feeling of increased job satisfaction if allowed to stay in one rotation longer initially in order to get to know people; start at the same hospital as their supervisor in order to have more contact with them; a feeling of burnout by the end of the orientation process due to the length of orientation; allowing for greater input into the process; and a better process for orientation to the “outfield” areas of practice.

There was variation in the answers to the question, “How do you feel you would have benefitted from an individualized orientation process?”, between the pre- and post-intervention

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groups. The pre-intervention group had suggestions of how the orientation could be improved, while the post-intervention group listed things they felt were beneficial in the process (*Table 1*). The pre-intervention group suggested: 1) giving a specific orientation to the “Mayo Ways” of doing things; 2) allowing them to have more input into their orientation; 3) requesting to orient to only one hospital; 4) requesting a go-to person to develop a safe relationship with to ask questions; 5) clear communication of where they were in the orientation process; and 6) an individual process would have respected years of experience allowing them to become independent much sooner. The post-intervention group stated: 1) they benefitted meeting with their supervisor to discuss areas of strength and weakness; 2) the process was beneficial to decrease the amount of time spent in areas of comfort and increase the amount of time in areas they were less comfortable; 3) they were able to focus on specific areas that were more difficult for them; and 4) they had a better time frame of how long or short orientation should be.

Pre-intervention CRNA Responses	Post-Intervention CRNA Responses
Would have had more input into my orientation	Greatly benefitted from meeting with supervisor to discuss areas of strength and weakness
Would have requested to only be oriented to one hospital	Was beneficial to decrease time spent orienting in areas of comfort, and increase time in areas of less comfort with more high risk cases
Would have requested a “go-to” person to ask questions	Able to focus on specifics that were difficult
Would have had a clear communication of where I was in the process	Better understanding of the timeframe of how long or short orientation should be
An individual process would have respected years of experience allowing the CRNA to become independent much sooner	
It would have eased the transition by answering questions related to orientation	

Table 1. Open-ended responses to “How did/would you have benefitted from an individualized orientation process?”

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There were similar comments among the pre- and post-intervention groups about what they felt went well during their orientation. Some of these include: the ability to fully explore the many areas within the anesthesia department; having enough time to become fully adjusted to being at Mayo Clinic; the ability to start their orientation with less complex cases moving to more complex cases when they felt comfortable; consideration of their prior work experience; working with preceptors that were knowledgeable and easy to work with; exposure to all areas where they would be working; good communication with their supervisor; and learning a lot of areas in a short amount of time (*Table 2*).

Pre-intervention CRNA Responses	Post-Intervention CRNA Responses
Ability to fully explore the many anesthesia departments	Felt supported during transition to Mayo Clinic
Receiving time to fully adjust to being at Mayo Clinic	Good communication with supervisor
Ability to start by learning less complex cases and moving to more complex cases later	Great staff and leadership
My prior work experience was considered	Able to learn many areas in a short amount of time
Preceptors were knowledgeable and easy to work with	Good preceptors
There was exposure to all areas I would be working in	
Learned to be flexible	

Table 2. Open-ended responses to “What went well during orientation?”

Comments about what did not go well with their orientation were more varied among the pre- and post-intervention groups. In the pre-intervention group, there was a common theme of having past experience as a CRNA, and receiving “critique” from a less experienced preceptor. Other comments included working with overly controlling anesthesiologists, not knowing what the expectations were, not knowing some protocols and where to find them, and working with preceptors in certain rotations that didn’t normally work in those areas. The post-intervention group commented that they would have liked to meet with their supervisor on a more regular

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basis, not getting to do a lot of large or complex cases while with a preceptor then having to do them on their own, and working with providers who have specific ways of doing things and aren't receptive to change (*Table 3*).

Pre-intervention CRNA Responses	Post-Intervention CRNA Responses
No orientation in some clinical areas	Did not meet with supervisor at regular intervals
As an experienced CRNA, felt "awkward" being critiqued by less experienced CRNAs	Some preceptors had specific ways of doing things and were not receptive to new ideas
Oriented by preceptors that didn't normally work in an area	Did not get into complex cases while with a preceptor, then had to do them on their own
Constant moving to other areas and hospitals	Started as a new hire in an area where new students were starting at the same time
Did not know what expectations of orientation were	
Not knowing some protocols or where to find them	

Table 3. Open-ended responses to "What did not go well during orientation?"

When asked for suggestions for improvement to the process, there were again differences between the pre- and post-intervention groups. The pre-intervention group focused on allowing new CRNAs more input into their orientation, and allowing the orientation to be tailored to individual CRNAs. They suggested evaluating past experience and shortening the orientation process. They also suggested allowing experienced CRNAs to focus more on workflow and processes. The post-intervention group suggested trying to stick more to the orientation plan once it is made, having more consistency with the "outfield" orientations, and increasing the amount of time spent to learn the electronic medical record.

CRNAs perceived they were more likely to remain employed at Mayo Clinic had they received an individualized orientation in the first three months of employment (p value 0.02), and felt retention of new CRNAs hired to Mayo Clinic would be higher with an individualized orientation (p value 0.08). Actual retention could not be analyzed and measured due to the

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exclusion of non-retained CRNAs from this study. There was an increase in perception of the impact of the new orientation process to retention of CRNAs to Mayo Clinic between the pre- and post-intervention groups. In the pre-intervention group, 46% agreed or strongly agreed they would be more likely to remain employed at Mayo Clinic had they received an individualized orientation in the first three months of employment. In the post-intervention group, 89% agreed or strongly agreed.

Discussion

This scholarly project was implemented to improve the orientation process of newly hired CRNAs to a large academic institution in an effort to decrease the length of time required to integrate them into clinical practice and increase their satisfaction. Orientation time was decreased from 1 year in the pre-intervention group to an average of 5.25 months in the post-orientation group. This equates to an average savings of approximately \$25,000 per CRNA due to a decrease in the amount of days spent in non-productive time 1:1 with a CRNA preceptor or their supervisor. The post-intervention group required fewer days spent 1:1, as well as fewer days of total orientation due to the individualization of their orientation plan. The average number of days spent 1:1 in the pre-intervention group was 65 days, while the post-intervention group was 1:1 for an average of 32 days. With 15-20 CRNAs hired per year, this equals a savings of approximately \$375,000-\$500,000 to the institution annually.

The percentage of CRNAs who reported increased satisfaction or highly increased satisfaction with the orientation process was improved from 69% of the pre-intervention CRNAs to 78% for the post-intervention CRNAs. These findings were not statistically significant; however, in an institution that hires approximately 15-20 CRNAs from outside of the institution each year at a significant cost, it is important for new CRNAs to be satisfied with the orientation

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process. Satisfaction with the orientation process could lead to increased job satisfaction as well as retention. These results also support findings from previous research concluding that a good orientation program will lead to increased satisfaction among new employees.

Comments in the open-ended questions regarding the overall orientation process were more positive in the post-intervention group. The pre-intervention group focused on areas for improvement within the orientation process, with the post-intervention group focusing on aspects that were beneficial in the orientation process. The open-ended comments of the pre-intervention group are consistent with findings of previous studies that new employees do not always receive orientations that meet their needs. Useful qualitative data was collected to assist the conducting institution and future researchers in improving CRNA orientation.

The implementation of the new orientation process was also beneficial to supervisors of new CRNAs at Mayo Clinic, giving them a structured program to use when orienting new employees rather than “reinventing the wheel” with each new CRNA. This was shown by an increase in the percentage of CRNAs who felt their supervisor was helpful and supportive during the orientation process from the pre-intervention group (77%) to the post-intervention group (100%). This increase may indicate that supervisors are more comfortable with the new orientation process, and are better able to support newly hired CRNAs.

Since this was a small study, there were limitations in the data collected, and a lack of statistical significance noted in most satisfaction quantitative survey questions. Another limitation resulted from the human resources department not allowing CRNAs to be surveyed who no longer worked at Mayo Clinic. Retention of CRNAs could not be measured or analyzed due to the exclusion of non-retained CRNAs. This limitation was important; as it was hypothesized by the CRNA leadership group that retention of newly hired CRNAs was

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negatively affected by the current orientation process, leading to several CRNAs leaving the institution soon after completing the 1-year long orientation. There is opportunity for further research into the relationship between orientation and retention.

There is very little research related to CRNA orientation programs, whether CRNAs are new graduates or come with years of experience. This study showed a small increase in satisfaction with the orientation process for CRNAs who received a tailored orientation versus a generic orientation, but was limited by small sample size. This small difference may be clinically meaningful and could be tested further with a larger study. Retention could also be formally studied with a larger study, which includes CRNAs that are currently employed and no longer employed at an institution.

Other suggestions for future research include looking at learning strategies when developing orientation programs. Learning strategies are skills that a new employee can use in order to complete a specific learning task.²⁷ When looking at orientation programs for new employees, it should be taken into account that adults possess different learning styles. The different learning styles affect an adult learner's ability to gain and apply knowledge and become engaged in the learning process.²⁸ If an orientation process can be tailored to the individual's learning style and allow the new employee to actively participate in the process, it may be more successful. Making the learning process more personal to the new employee and adult learner can be one of the most effective strategies for success.²⁹ When considering the orientation process of new employees, the effectiveness of the education will be maximized by tailoring the teaching strategies being used to the individual's adult learning style.²⁸

In addition to formal training in the workplace, it should be noted that a new employee can also gain skills through everyday work tasks and through social interactions with peers and

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co-workers.³⁰ A formal mentorship program that focuses on enculturation into the anesthesia department and the institution could be of benefit at a large academic medical center. It may be difficult for newly hired CRNAs to become comfortable with their peers and co-workers in a department that employs over 550 people. The implementation of a mentorship program is currently being studied at Mayo Clinic, and may lead to further increase in the satisfaction of new CRNAs during the orientation process.

Conclusion

The importance of this scholarly project was the decrease in orientation time leading to significant cost savings to the institution. The project also shows that implementation of an individualized orientation program can lead to increased satisfaction with the process, and may lead to an increase in retention of employees where the cost of hiring and orientation is significant to the institution. CRNAs who are not satisfied with their orientation and do not feel supported by their supervisor may be less satisfied with their job and more inclined to leave that job resulting in the need to recruit, hire and orient more CRNAs.

The cost to recruit, interview, hire and orient new CRNAs to a large academic medical center is significant. There is little research related to CRNA orientation programs for newly hired CRNAs who are either new graduates or have prior experience. More research is needed to determine the best type of orientation program for new CRNAs hired to large medical centers with varied background and experience levels, along with the relationship between the orientation process and retention.

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Appendix A: IRB approval letters

From: IRBe
Sent: Tuesday, August 30, 2016 3:49 PM
To: Gorman, Katherine A., APRN, CRNA
Subject: 16-004139 - An application has been deemed Not Research by IRB

Principal Investigator Notification:

From: Mayo Clinic IRB

To: Katherine Gorman

CC: Katherine Gorman
There are no items to display

Re: **IRB Application #:** [16-004139](#)

Title: Individualizing the Orientation Process for Newly Hired CRNA's in a Large Academic Medical Center

IRBe Protocol Version: 0.01

IRBe Version Date: 8/16/2016 12:45 PM

IRB Approval Date: 8/30/2016

IRB Expiration Date:

The IRB reviewed the above referenced application. The Reviewer noted that the application involves a quality improvement project and determined that it does not constitute research as defined under 45 CFR 46.102. Continued IRB review of this application is not required.

Mayo Clinic Institutional Reviewer

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Flint Institutional Review Board • 530 French Hall, 303 E. Kearsley St., Flint, MI 48502 • phone (810) 762-3383 • fax (313) 593-0526 • research@umflint.edu

To: Katherine Gorman

From:

Marianne

McGrath

Cc:

Jane

Motz

Gena

Welch

Katherine

Gorman

Subject: Notice of Exemption for [HUM00119936]

SUBMISSION INFORMATION:

Title: Individualizing the Orientation Process for Newly Hired CRNA's in a Large Academic Medical Center

Full Study Title (if applicable): Individualizing the Orientation Process for Newly Hired CRNA's in a Large Academic Medical Center

Study eResearch ID: [HUM00119936](#)

Date of this Notification from IRB: 9/12/2016

Date of IRB Exempt Determination: 9/12/2016

UM Federalwide Assurance: FWA00004969 (For the current FWA expiration date, please visit the [UM HRPP](#)

[Webpage](#))

OHRP IRB Registration Number(s): IRB00000248

IRB EXEMPTION STATUS:

The IRB Flint has reviewed the study referenced above and determined that, as currently described, it is exempt from ongoing IRB review, per the following federal exemption category:

EXEMPTION #2 of the 45 CFR 46.101.(b):

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Note that the study is considered exempt as long as any changes to the use of human subjects (including their data) remain within the scope of the exemption category above. Any proposed changes that may exceed the scope of this category, or the approval conditions of any other non-IRB reviewing committees, must be submitted as an amendment through eResearch.

Although an exemption determination eliminates the need for ongoing IRB review and approval, you still have an obligation to understand and abide by generally accepted principles of responsible and ethical conduct of research. Examples of these principles can be found in the Belmont Report as well as in guidance from professional societies and scientific organizations.

SUBMITTING AMENDMENTS VIA eRESEARCH:

You can access the online forms for amendments in the eResearch workspace for this exempt study, referenced above.

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ACCESSING EXEMPT STUDIES IN eRESEARCH:

Click the "Exempt and Not Regulated" tab in your eResearch home workspace to access this exempt study.

A handwritten signature in black ink, appearing to read 'M. McGrath', with a large loop at the end.

Marianne McGrath
Chair, IRB Flint

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Appendix B: Informed consent

Informed Consent

As a graduate student in the University of Michigan-Flint Doctor of Anesthesia Practice program, I invite you to participate in a graduate program research project. You will be invited to participate in a survey at some point during or after your clinical orientation as a newly hired CRNA at Mayo Clinic-Rochester.

Project description and objective: My project involves redesigning the orientation process for CRNAs hired to Mayo Clinic from outside the institution. The new orientation process will include a clinical orientation that is individualized for each new CRNA, taking into account their background and past experience, and will allow the new CRNA to have input into the clinical orientation process. The purpose of this survey is to determine whether an individualized orientation leads to greater retention and job satisfaction compared to the current orientation process in which all new CRNAs receive the same clinical orientation.

The questionnaire consists of 27 questions and will take approximately 15 minutes to complete. The questionnaire will be conducted with an on-line Qualtrics created survey. You are not required to answer every question. Answering one or more survey questions implies consent to participate in this project.

Risks are minimal for this study. There are no direct benefits for participants; it is hoped that through your participation, researchers will learn more about whether an individualized clinical orientation as a newly hired CRNA will lead to increased retention and job satisfaction. There is no direct compensation.

All data obtained from participants will be anonymous, kept confidential, and will only be reported in an aggregate format (by reporting only combined results and never reporting individual ones). All questionnaires will be concealed, and no one other than the primary investigator and advising professors listed below will have access to them. The data collected will be stored in the HIPPA-compliant, Qualtrics-secure data base until it has been deleted by the primary investigator.

Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your employment or academic status, GPA, or standing with Mayo Clinic or the university. If you desire to withdraw, please notify the principal investigator at this email: gorman.katherine@mayo.edu

If you have questions regarding this study, you may contact the principal investigator at gorman.katherine@mayo.edu or 507-293-4894. If you have questions but do not feel comfortable asking the researcher, you may contact Gena Welch, CRNA, MS, welchg@umflint.edu, 810-262-7264, or Dr. Jane Motz, CRNA, 810-262-6789, motzj@umflint.edu.

You may also contact the University of Michigan-Flint Institutional Review Board (IRB) Research Compliance Specialist, Mary Mandeville, 810-762-3383, irb-flint@umflint.edu or Mayo Clinic IRB specialist Pamela Jones, 507-266-4000, jones.pamela@mayo.edu.

Thank you for your anticipated participation.

Katherine Gorman, CRNA, MNA

Written name: _____

Signature: _____

Date: _____

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Appendix C: Clinical competency tool to determine orientation needs for new CRNAs

Name: _____

Date: _____

Clinical Competency Survey for New CRNA Staff

Please rate the following questions on a scale of 1-4:

- 1 - Do not feel competent, have had little experience in this area, would like prolonged orientation period for these cases.
 - 2 - Have some competence in this area, would like more experience and slightly longer orientation period to these cases.
 - 3 - Feel mostly competent in this area, would need short orientation period and to learn Mayo way of doing orientation for these cases.
 - 4 - Feel completely competent in this area; have had much experience, only need to learn Mayo way of doing anesthesia for these cases.
-

1. Please rate your orientation needs for the following areas using the scale above:

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	General Surgery
	Orthopedic Surgery
	Gynecologic Surgery
	Plastic Surgery
	ENT Surgery
	Pediatrics
	Thoracic Surgery
	Vascular Surgery
	Cardiac Surgery
	GI/Endoscopy suite
	Interventional Radiology
	Cardiac Cath Lab
	Transplant cases
	Endovascular cases
	Neuro Surgery
	Obstetrics
	Technical Skills:
	Arterial Line Placement
	Invasive Monitoring
	Spinal Drain Management
	Electronic Medical Record:
	Chart Plus
	Synthesis
	MICS Lastword
	CDM reports
	QReads
	Microsoft Outlook

2. Please list any areas that you would benefit from extra orientation time:

3. Which areas do you feel you will need minimal orientation (need only to orient to the general layout and case specific idiosyncrasies for the area)?

4. Please tell us specifically if there is anything you feel should be included in your clinical orientation?

5. Please tell us anything else you feel is pertinent to your clinical orientation.

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Appendix D: New CRNA orientation checklist

Name: _____

Date: _____

New CRNA Orientation Checklist

I. Preliminary tasks prior to new employee starting

- _____ Welcome email to new employee that includes week one schedule, information about who will meet them on the first day and where they should park and be met
- _____ Obtain pager, locker, quarterly information, card access, mailbox
- _____ Obtain access to Chart+, CDM, MICS
- _____ Obtain access to Synthesis and Pyxis (in [AMS](#))
- _____ Assign OPPE's, assign "Radiology MRI Safety Level 2 2016"

II. First Day

- _____ Meet new employee and bring them to the surgical area

Give tour of:

- _____ Locker room areas – give them their locker number and combination
- _____ Break rooms, rest rooms, cafeteria
- _____ Introduce them to the administrative assistant and tour office areas
- _____ Anesthesia Library
- _____ Conference rooms and mailboxes
- _____ Route from parking ramps to surgical areas
- _____ Main surgical suite areas

Obtain access to Mayo Intranet:

- _____ Sign in using LAN ID and temporary password

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_____ Set up email; give brief tutorial of Outlook if new CRNA hasn't used it previously

_____ Review Lawson, assist to set up accounts for direct deposit of pay check (review [For You](#) webpage)

_____ Set up Pyxis ID in [AMS](#)

Discuss orientation plan:

_____ Fill out survey of past experience and perceived clinical orientation needs to determine course of orientation ([Clinical Competency Survey](#))

_____ Discuss survey with new CRNA to determine clinical orientation needs and schedule

_____ Create and discuss timeline of orientation, what to expect, approximate time to be spent in each clinical area, how many days spent 1:1, and orientation to outfield areas

III. Miscellaneous non-clinical tasks to be completed

_____ Provide Mayo pocket calendar and retractable badge clip to new CRNA if desired

_____ Discuss parking and card access, including which ramps are available for CRNA parking, and which areas of the hospital their card will access

_____ Explain the Wednesday to Tuesday work week, and when pay day occurs

_____ Time card: how and when to fill out time card, how to enter PTO, FMLA, shift differentials, and how to view leave balances ([WTK](#))

_____ My CRNA Shifts Worked: how to use daily hour tracking tool ([Anes home page](#))

_____ Unscheduled requests – what these are and how to use the electronic tool ([CRNA home page](#))

_____ Arrange meeting with PTO focus group member to learn PTO request process ([CRNA home page](#))

_____ Mayo provided CEUs and CEU trip availability and process ([CRNA home page](#))

_____ [FMLA Policy](#) / [STD Policy](#)

_____ [Maternity/paternity leave policy](#)

_____ [Funeral leave](#)

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- _____ Dress code
- _____ Electronic use policy including cell phone/ipad use
- _____ Ill call process – who and when to call
- _____ [Provide phone number lists](#)
- _____ Provide [organizational chart](#) with Directors, Supervisors, Leads
- _____ Explain end of day relief system
- _____ Assist to set up remote access for home computer or email on phone if desired ([Help Desk website](#))
- _____ Assist with Auto-logon to Mayo Dock
- _____ Schedule: explain how the schedule works, where to find their daily schedule and room assignments, how to make schedule requests, when the schedule comes out
- _____ Explain call and holiday call responsibilities ([CRNA home page](#))
- _____ Explain the call light system, text paging, priority paging
- _____ Discuss the [Dan Abraham Healthy Living Center](#)
- _____ Discuss required educational competencies; where to find them, when they are do ([My Learning](#))
- _____ Discuss credentialing and required OPPEs
- _____ Explain morning sign in times and exceptions to these times (meetings, early start Ors)
- _____ Provide list of surgical start times for ORs at the three different sites
- _____ Discuss role of anesthesia techs in our practice
- _____ Explain Monday morning CEU meetings, staff meetings, quarterly performance improvement meetings, and other required meetings
- _____ Provide vocabulary sheet with “[Mayo Acronyms](#)” and what they stand for
- _____ ACLS/PALS cards – explain the process to sign up for classes (faxing a copy of your current card before you can [register for classes](#))

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_____ Discuss the Allied Health Employee Policy Manual and what is located within this manual (ie Funeral Leave, Shift Differential policies)

IV. Electronic Medical Record

_____ Anesthetic Pre-procedure Form (CDM): requirements for completion of CDM for medically directed and non-medically directed cases

_____ Synthesis

_____ Chart+: set up meeting with members of the Chart+ team after initial 1:1 period to discuss specifics related to billing, student coverage, and other important charting requirements

_____ Mayo Integrated Clinical Systems (MICS)

_____ Eboard and SPS (Surgical and procedural scheduling)

_____ Iviewer

V. Clinical orientation tasks

_____ Pre-op and PACU areas – how to find your patient using the patient tracker system

_____ Blood bank: how to order blood products and where to get them, massive blood transfusion, coolers, storage of blood

_____ Lab: How to order and send lab specimens, documentation of time drawn

_____ Monitored carts: when to use one and where to find them, use of portable pulse oximeter

_____ ICU pick-ups

_____ Elevators to ICUs – which elevators to use for specific ICUs

_____ ICU locations and patient populations

_____ Schedule week with transport person to learn ICU locations, use of transport ventilator, policies of different ICUs when picking up patients

_____ Code cart and emergency airway cart locations

_____ Zoll training if necessary

_____ GlideScope and fiberoptic scope locations

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- _____ Discuss the use of Level 1 and Belmont for rapid infusion and the locations of these
- _____ Code process: how to call a code, who responds
- _____ Fire response in the OR
- _____ Set up meeting with Biomed staff after two weeks in the OR ([Anesthesia Equipment Maintenance web page](#))

Competencies:

- _____ Geriatric Competency
- _____ Pediatric Competency
- _____ CRNA Orientation

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Appendix E: List of Mayo Clinic terminology for new CRNAs*List of Mayo Terminology for New CRNA Staff*

Angio	Neuro interventional radiology
CDM	Clinical Document Manager, patient medical history
Central	clinical area including thoracic, ortho, and ortho spine
CL	Cardiac Catheterization Lab (Cath Lab), electrophysiology lab and implantable cardiac devices
Consultant	anesthesiologist
CV	clinical area including cardiac and vascular surger
Flex	indicates days off in schedule when staff works less than five days a week (< 1 FTE)
Gonda	Outpatient procedure area including 4 floors of different subspecialties
Lawson	online portal to access benefit and paycheck information
Lead/Clinical Specialist	person or persons in each area available as a resource for staff working in that area each day
Multi 1	clinical area including general surgery, bronch, and ENT
Multi 2	clinical area including all pediatric subspecialties except cardiac
My CRNA Shifts Worked	daily time tracking tool used for relief and tracking of hours
N1	clinical area including orthopedics
N2	clinical area including general surgery, kidney transplant and liver transplant
NeRads	Neuroradiology lead
Neuro	clinical area including neuro and neuro spine
Neuroradiology	clinical area including MRI, CT and neuro interventional radiology
NMD	non-medically directed
OOT	out on time (end of day request)
OPPE	ongoing professional performance evaluation
PAME	pre-anesthetic medical evaluation
POE	preoperative evaluation
PTO	paid time off
Quarterly	online directory for Mayo employees
RMC	Rochester Methodist campus
RMG	blood glucose monitor
SMC	Saint Marys campus
South	clinical area including gynecology and plastics (Rochester Methodist)
TC	time coming for call shifts worked
UCI	urinary catheter in
UCO	urinary catheter out
VL (Vascular Lab)	interventional radiology, ultrasound, CT ablation, nuclear medicine

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WTK	timekeeping program for time card completion
Z line	arterial line extension

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Appendix F: Orientation webpage

MAYO CLINIC

People Intranet Forms Drugs AskMayoExpert Advanced

Search

Home Practice Education Research HR Connect Groups Policies Video Library Calendar

Anesthesiology – RST

search this site

Anesthesia Home Schedules Policies/Procedures/Guidelines Clinical Practice Education Research Support Services Emergency Plans

Anesthesia Home

Send to a Co-worker Print

Anesthesia Home

Committees
Names and Numbers
Divisions/Sections
Performance Improvement
Department News
Anesthesiology Newsletters

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Virtual desktops giving physicians more time with patients

New health system tools reduce the number of falls with injuries

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Clinical Divisions:

- [Cardiac](#)
- [Central](#)
- [Community Anesthesia](#)
- [Critical Care](#)
- [Multi](#)
- [Neuro](#)
- [Pain Medicine](#)
- [Peds Anesthesia](#)
- [RMC North](#)
- [RMC South](#)

Sections:

- [Cardiac Lab](#)
- [Gonda/OPC](#)
- [Liver Transplant](#)
- [OB Anesthesia](#)

Related Groups:

- [Blood Management](#)
- [ECMO](#)
- [Peds IMP/Children's Center](#)
- [Respiratory Care](#)

Workgroup Gateway:

Consultant **CRNA** Fellow Resident Secy SRNA Techs

- [CRNA home page](#)
- [Call Schedules](#)
- [My CRNA Shifts Worked](#)
- [CRNA PTO/Trip Request Form](#)

CRNA Lead Resources:

SMH CRNA – 127-02691 or 5-7063
RMH CRNA – 127-68038 or 6-8038

Quick Links:

- L: drive
- Frequently Called Numbers
- Call Resources
- Chart+ Summary
- Weekly Conferences
- Who's On Call Today
- Work-Related Injuries
- Access Anesthesiology
- PubMed
- UpToDate®

OR Emergency Manual

Latest Department News

- Sugammadex Q&A Sessions with Merck Representative September 23, 2016
- CORRECTION: CRNA Journal Club – Tuesday, September 20, 2016 Is Still On September 20, 2016
- Community Anesthesia Newsletter – September 2016 September 8, 2016
- Mayo Clinic Seminar for Nurse Anesthetists September 8, 2016

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- CRNA Staff Listing

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- Postgrad CRNA Lectures
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- Effective Clinical Instruct.
- Professional Feedback Delivery

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- Liver Tx/Sedation
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- Peds Heart
- Transport/Resource
- RMC Summer Backup

SBAR Tools:

- Cardiac
- Multi

my CRNA shifts worked

Time Off:

- CRNA PTO/Trip Request Form
- Calendar View – CRNA PTO/Trip Requests
- List View – CRNA PTO/Trip Requests
- Trip Policy: CRNA
- 2017 PTO Guidelines
- CRNA Meetings
- Seniority Listings
- PTO Request Tracker
- Schedule Request Dates
- Unscheduled Requests

Trip Card Submission Forms:

- RMH/Gonda Staff (Deb Hovey)
- SMH Staff (Ann Brumm)

Work Guidelines:

- Cardiac Call
- Off-Shift Call (SMC)
- Relief

Quick Links:

- L: drive
- Supervisor Group Paging
- Community Anesthesia Server
- CRNA Staff Meeting Videos
- Anesthesiology Newsletters

Mayo Clinic Seminar for Nurse Anesthetists
Forty-Second Annual
October 30 - November 2, 2016
Mayo Clinic, Mayo Clinic Building
Rochester, Minnesota

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Staff Orientation
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Consultants **CRNA** Anes Technician

- [Clinical Competency Survey for New CRNA Staff](#)
- Competencies:
 - [Core](#)
 - [Geriatric](#)
 - [Pediatric](#)
- [New CRNA Orientation](#)
- [Terminology List for New CRNA Staff](#)
- [Work Unit Orientation Checklist](#)

Additional Resources:

- [Allied Health Staff Employee Policy Manual](#)

Competencies/Training

NOTE: The following competencies should be assigned in [My Learning](#).

Department-Wide Training

- Radiology MRI Safety Level 2 (2016)
- CDM Updates Due to Joint Commission Citation (2014)
- HemoSafe (2013)
- Glycemic Control Training (2013)
- Perioperative DataMart (Chart+) Alerts (2013)
- Central Venous Catheter Infection Prevention (2011)
- Fire Safety in Anesthesia (2011)

CRNA OPPE Competencies:

- CRNA OPPE: The Chart Plus Back-Up Anesthesia Record (2014)
- CRNA Training: Event Reporting (2014)
- CRNA OPPE: Bedside Sedation (2013)
- CRNA OPPE: Infusion Pump Transition (2012)
- CRNA OPPE: Pyxis (2012)
- Fire Safety – Anesthesia (Pathlore) (2011)

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Competencies/Training

NOTE: The following competencies should be assigned in [My Learning](#).

Department-Wide Training

- Radiology MRI Safety Level 2 (2016)
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- Central Venous Catheter Infection Prevention (2011)
- Fire Safety in Anesthesia (2011)

CRNA OPPE Competencies:

- Central Line Access Care
- PIE 1/17 Bupivacaine Lipsome
- OR to PACU Communication
- Pre-Anesthesia and Billing Documentation
- Pyxis S Barcode Scan on Return
- Pyxis ES Medstation: Remove Medication from a Non-profile Station
- Pyxis ES System Anesthesia Provider Workflow Processes
- CRNA OPPE: The Chart Plus Back-Up Anesthesia Record (2014)
- CRNA Training: Event Reporting (2014)
- CRNA OPPE: Bedside Sedation (2013)
- CRNA OPPE: Infusion Pump Transition (2012)
- CRNA OPPE: Pyxis (2012)
- Fire Safety – Anesthesia (Pathlore) (2011)

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Appendix G: Allied Health Employee Policy Manual

Staff Orientation
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Consultants **CRNA** Anes Technician

- [Clinical Competency Survey for New CRNA Staff](#)
- Competencies:
 - [Core](#)
 - [Geriatric](#)
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- [New CRNA Orientation](#)
- [Terminology List for New CRNA Staff](#)
- [Work Unit Orientation Checklist](#)

Additional Resources:

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INDIVIDUALIZING THE ORIENTATION PROCESS

Appendix H: Orientation survey for new CRNAs

This survey is being sent to CRNAs who were hired to Mayo Clinic from outside the institution to determine whether an individualized orientation will result in a shorter orientation period, and will cause an increase in job retention and job satisfaction compared to a generic orientation. The survey is being sent to CRNAs hired from January 2011 to December 2015, and CRNAs hired from September 2016 to February 2017. Please think back to the first three months of your orientation when completing the survey. The orientation process for the first three months of orientation as an outside CRNA to Mayo Clinic will be redesigned to individualize the process and determine whether the results lead to a shortened orientation time, and an increase in retention and satisfaction. The redesign of the orientation process and this survey are part of the scholarly project for Katherine Gorman, a CRNA supervisor at Mayo Clinic, for the completion of the DrAP degree at the University of Michigan-Flint.

The survey will take approximately 15 minutes to complete. The results will be anonymous and securely stored in a password protected database. Participation in the survey is voluntary.

Survey:

1. Do you consent to participate in this research study for the purpose of determining whether an individualized orientation process will lead to a shorter orientation time and increased job satisfaction and retention compared to a generic orientation process?

Yes or No

2. Did you receive an orientation plan that was specific to your clinical orientation needs? Yes or No
3. Did your orientation plan include adequate time in each clinical rotation? Yes or No
4. Did you feel your clinical orientation allowed you to integrate into all areas of the practice? Why or Why not?
5. On a scale of 1-5 with 5 being the most satisfied, how satisfied were you with the overall orientation process?
6. On a scale of 1-5 with 5 being the most satisfied, how satisfied were you with your clinical preceptors?

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7. On a scale of 1-5 with 5 being the highest, did you feel you were able to be an active participant in the creation of your clinical orientation schedule?
8. On a scale of 1-5 with 5 being the highest, did you feel you were able to have input into the orientation process?
9. On a scale of 1-5 with 5 being the highest, do you feel your supervisor was supportive and helpful to you during your orientation?
10. Do you feel an orientation process individually tailored to each CRNA would be more effective than using the same orientation process for all CRNAs hired to Mayo Clinic from outside the institution?
 - a. Strongly Disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
11. Are you/would you be more likely to remain employed as a CRNA at Mayo Clinic if you had received an individualized orientation in the first three months of employment?
 - a. Strongly Disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
12. Thinking back to your first three months of orientation, would retention of new CRNAs hired to Mayo Clinic be higher with an individualized orientation?
 - a. Strongly Disagree
 - b. Disagree
 - c. Neutral

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- d. Agree
- e. Strongly Agree

13. Did the first three months of orientation have an effect on your retention to the institution?

- a. The first three months of orientation had no effect on retention
- b. The first three months of orientation had a small amount of effect on retention
- c. Neutral
- d. The first three months of orientation had some effect on retention
- e. The first three months had a large effect on retention

14. Please comment on how you feel job retention at the Mayo Clinic would be increased or decreased had you received an individualized orientation as a newly hired CRNA to the Department of Anesthesia.

15. Would your overall job satisfaction as a CRNA at Mayo Clinic be increased or decreased if you received an individualized orientation as a newly hired CRNA?

- a. Highly decreased job satisfaction
- b. Decreased job satisfaction
- c. Neutral
- d. Increased job satisfaction
- e. Highly increased job satisfaction

16. Please comment on how you feel your job satisfaction as a CRNA at Mayo Clinic would be increased or decreased had you received an individualized orientation as a newly hired CRNA to the Department of Anesthesia.

17. Please comment on the reasons you would be more or less likely to remain employed as a CRNA at the Mayo Clinic had you received an individualized orientation as a newly hired CNRA.

18. Please comment on how you feel you would have benefitted from an individualized orientation process as a newly hired CRNA to the Mayo Clinic.

19. Please comment specifically on what you felt went well during your orientation.

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20. Please comment specifically on what you felt did NOT go well during your orientation.
21. Please comment specifically about what would have made your own orientation better.
22. Please give suggestions for improvement to the orientation process for CRNAs hired to Mayo Clinic from outside the institution.
23. Please comment on any other information you feel would be useful for supervisors to know regarding the orientation of CRNAs hired to Mayo Clinic.
24. What is your age?
 - a. 25-29
 - b. 30-34
 - c. 35-39
 - d. 40-44
 - e. 45-49
 - f. 50-54
25. How many years of experience did you have when you were hired as a CRNA to Mayo Clinic?
 - a. 0-5
 - b. 6-10
 - c. 11-15
 - d. 16-20
 - e. 21-25
 - f. I was a new graduate when I was hired to Mayo Clinic as a CRNA
26. If you came to Mayo Clinic as an experienced CRNA, how many CRNAs were employed at the organization where you previously worked?
 - a. 0-5
 - b. 6-10

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- c. 11-20
- d. 21-40
- e. Greater than 40

27. What is your current employment status as a CRNA at Mayo Clinic?

- a. Remain employed as a CRNA at Mayo Clinic
- b. No longer employed as a CRNA at Mayo Clinic
 - i. If no longer employed at Mayo Clinic, please comment on the reason for leaving Mayo as a CRNA

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